

## Summary of Comments and Recommendations

In the proposed rule published on August 10, 2016 (81 FR 52796), we requested that all interested parties submit written comments on the proposal by October 11, 2016. We also contacted appropriate Federal and State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. Newspaper notices inviting general public comment were published in the San Antonio Express News and the Carlsbad Current-Argus. We received requests for public hearings, and we held two public hearings: in Laredo, Texas, on June 13, 2017, and in Carlsbad, New Mexico, on June 15, 2017. The comment period was reopened for 30 days on May 30, 2017 (82 FR 24654), until June 29, 2017.

~~During the first comment period, we received 24 comment letters directly addressing the proposal.~~ During the second comment period and at the public hearings, we received 16 comment letters and statements directly addressing the proposal. ~~Seven commenters expressed general support for our proposal, and four commenters expressed general opposition.~~ All substantive information provided during the comment periods has either been incorporated directly into this final determination, into the SSA report, or addressed below. We received several comments that clarified various topics within the SSA report or this rule, and we incorporated them as appropriate. Comments received were grouped into 10 ~~XXX~~ general issues specifically relating to the proposed listing status for the Texas hornshell and are addressed in the following summary and incorporated into the final rule as appropriate. ~~Additionally, we received five comments regarding designation of critical habitat for Texas hornshell.~~

*Peer Reviewer Comments*

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinion from five knowledgeable individuals with scientific expertise that included familiarity with Texas hornshell and its habitat, biological needs, and threats. During development of the SSA report, we reached out to five peer reviewers and received responses from four; all comments were incorporated into the SSA report prior to the proposed rule. During the comment period for the proposed rule, we reached out to an additional five peer reviewers, and we received responses from three. We reviewed all comments received from the peer reviewers for substantive issues and new information regarding the listing of the Texas hornshell. The reviewers were generally supportive of our approach and made suggestions and comments that strengthened our analysis. Peer reviewer comments are addressed in the following summary and incorporated into the SSA report and this final rule as appropriate.

*(1) Comment:* One peer reviewer, NMDGF, [the New Mexico State Lands Office \(NMSLO\)](#), and ~~five~~<sup>four</sup> commenters stated that we should not presume the species has been extirpated from all locations in Mexico, given the lack of surveys particularly from the Gulf Coastal region.

*Our Response:* ~~We agree. While w~~<sup>We</sup> have relatively recent survey information for the Rio Salado (most recent surveys occurred in 2004); ~~however;~~ the information from the coastal Mexican rivers was generally collected in the 1980s and 1990s. ~~As a result of this comment~~<sup>Since the proposed rule</sup>, we have examined available imagery ~~from of~~ rivers in the Gulf Coastal region of Mexico, and it seems plausible that the species may remain extant in this region. However, the imagery does not provide information on water levels or water quality in those rivers. Therefore, we cannot predict the size or health of any potential populations nor identify exactly where they may occur. The only recent information we have regarding Texas

hornshell populations in Mexico are in the Rio Salado in Nuevo Leon. This population was originally reported in 1891 (Mussel Project 2015). When [this area](#) was revisited in 2004 (Strenth *et al.* 2004, p. 227), household waste was found throughout the river and no live individuals were found. Therefore, while Mexican populations may be extant today, we have little confidence that they are large or protected from threats. We have updated the SSA report to reflect the possibility that Texas hornshell populations may remain extant in coastal Mexican rivers, but we are not able to rely on any of these potential populations to maintain Texas hornshell viability into the future. We have incorporated this information into the species' current condition in the SSA report and in this final rule.

*(2) Comment:* One peer reviewer suggested we incorporate the effects of population fragmentation and isolation on the species.

*Our Response:* We discussed population isolation in our analysis of barriers to fish movement. Because the host fish may no longer move between populations of Texas hornshell, there is no immigration of individuals to increase genetic diversity and recolonize after stochastic events. The effect of this isolation is incorporated into our analysis of the current and future condition of populations.

#### *Federal Agency Comments*

~~*(3) Comment:* We received one letter from the International Boundary and Water Commission providing clarification on water delivery obligations.~~

~~*Our Response:* We appreciate the clarifications on the 1944 Treaty with Mexico and have incorporated their suggestions into the SSA report and into our analysis of the effects of the loss of flowing water on Texas hornshell.~~

#### *Comments from States*

(34) *Comment:* We received one comment from the Texas Commission on Environmental Quality (TCEQ) clarifying the surface water rights and treaty obligations in the rivers inhabited by Texas hornshell.

*Our Response:* In the SSA report, we have clarified water management responsibilities of inland rivers occupied by Texas hornshell, as well as obligations under the 1944 Treaty between the United States and Mexico, which governs water management in the mainstem Rio Grande.

(45) *Comment:* We received ~~a comments letter~~ from ~~the New Mexico Department of Game and Fish~~ (NMDGF, NMSLO, and one commenter) expressing concern that listing may affect relationships with landowners along the Black River and that we have not adequately considered the conservation being implemented in the Black and Delaware River watersheds. In particular, NMSLO requested we evaluate the conservation efforts using our Policy for Evaluation of Conservation Efforts when Making Listing Decisions (PECE).

*Our Response:* We share ~~NMDGF's the commenters'~~ desire to maintain relationships with landowners along the Black River. NMDGF has spent considerable time and effort developing relationships with the private landowners on the Black River in order to access the river, survey for Texas hornshell, and implement conservation measures for the species. ~~We understand that there was a lot of confusion and concern about the effect of listing the Texas hornshell. The Service, NMDGF, NMSLO, Bureau of Land Management (BLM), and private landowners have implemented CCAs/CCAAs for Texas hornshell in the Black and Delaware River watersheds, which will provide voluntary conservation that will reduce threats to the species while improving physical habitat and water quality. We encourage any landowners with a listed species present on their property and who think they carry out activities that may~~

~~negatively impact that listed species to work with the Service. We can help those landowners determine whether a habitat conservation plan (HCP) or safe harbor agreement (SHA) may be appropriate for their needs. These plans or agreements provide for the conservation of the listed species~~Texas hornshell while providing the landowner with a permit for incidental take of the species during the course of otherwise lawful activities. ~~Please see our Texas Coastal Ecological Services Field Office for additional information on these plans and agreements (see FOR FURTHER INFORMATION CONTACT).~~It is our intent that these agreements will help maintain landowner relationships in the Black and Delaware River watersheds.

Because the CCAs/CCAAs cover the Black and Delaware River watersheds and not the full range of the species, the reduction in threats is not widespread enough to preclude listing the Texas hornshell as an endangered species. We apply PECE to determine if the conservation efforts provide certainty of implementation and effectiveness and, thereby, improves the status, as defined by the Act, of the species such that it does not meet the Act's definition of a threatened or endangered species. Although the CCAs/CCAAs will improve the status of the Texas hornshell in the Black and Delaware Rivers, there are four populations of Texas hornshell that will not be affected by the agreements. Therefore, the agreements will not improve the status of Texas hornshell such that it does not meet the Act's definition of a threatened or endangered species.

(56) *Comment:* TCEQ and ~~three~~four commenters stated that our population survey information is limited and that we need to delay a final determination until more surveys are conducted and more data are collected. Additionally, three commenters requested we extend the final listing deadline by ~~6~~six months in order to consider additional data and new science.

*Our Response:* In accordance with section 4 of the Act, we are required to determine whether a species warrants listing on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards under the Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines ([www.fws.gov/informationquality/](http://www.fws.gov/informationquality/)), provide criteria and guidance, and establish procedures to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for determining whether a species warrants listing as an endangered or threatened species.

In addition, the Act requires the Service to publish a final rule within 1 year from the date we propose to list a species. This 1-year timeframe can only be extended only if there is substantial disagreement regarding the sufficiency or accuracy of the available data relevant to the determination or revision concerned, but only for 6 months and only for purposes of soliciting additional data. In such a case, under section 4(b)(6)(B)(i) of the Act, the Secretary may extend the 1-year period to make a final determination by up to 6 months for the purposes of soliciting additional data. In this case, we considered the best scientific and commercial data available regarding the Texas hornshell to evaluate their potential status under the Act. We solicited peer review of our evaluation of the available data, and our peer reviewers generally supported our analysis. Based on the comments received and data evaluated, there is not substantial disagreement regarding the sufficiency or accuracy of the data. Science is a cumulative process, and the body of knowledge is ever-growing. In light of this fact, the Service

will always take new research into consideration. If plausible new research supports amendment or revision of this rule in the future, the Service will modify the rule consistent with the Act and our established work priorities at that time.

(76) *Comment:* We received two comments from NMDGF regarding our analysis of the current and future influences on Texas hornshell viability. They cautioned us not to presume all sedimentation is detrimental to Texas hornshell; some sedimentation is part of the natural state of the watershed. Additionally, they did not agree that predation is a significant risk to the species, stating that low water levels would cause mortality before predation levels increase.

*Our Response:* ~~We agree that~~ Texas hornshell require seams of fine sediment under boulders and bedrock and in streambanks in order to anchor themselves into place. However, too much sedimentation, which can cause smothering, is a significant risk to the species rangewide. Please see Chapter 4.1 and Appendix B of the SSA report for more discussion of the risks of sedimentation.

In most of the streams occupied by Texas hornshell, we agree that low water levels would affect populations before predation is a significant factor. This scenario is because the species occupies crevices in streambanks and under boulders, which provide protection from predators. However, in the Devils River, Texas hornshell are found in gravel and cobble substrate in riffles. These habitats become easily accessible to terrestrial predators, such as racoons (*Procyon lotor*), when water levels drop, and significant levels of predation on Texas hornshell have been observed during times of low water levels. We have clarified in the SSA report and above in this preamble that this situation is primarily a concern for the population in the Devils River.

*Public Comments*

(Z8) *Comment:* Three commenters stated that existing laws and policies related to oil and gas production and surface water rights, such as the Clean Water Act, Oil Pollution Act, Resource Conservation and Recovery Act, and Pollution Prevention Act, will provide sufficient protection to Texas hornshell populations. According to the commenters, these laws and subsequent regulations provide many protections for freshwater systems including spill prevention measures, stormwater measures, and hazardous waste management, among others, which prevent the Texas hornshell in the Black River from being affected by oil and gas exploration. Further, the commenters state that groundwater use in Texas is governed by the Texas Groundwater Act, and ground and surface water rights in New Mexico are permitted by the Office of the State Engineer, and that these laws and policies provide at least as much protection as listing under the Act.

*Our Response:* ~~The Service disagrees that these laws and policies eliminate the risk of water quality impairment and low water flow on Texas hornshell in the Black River in New Mexico.~~ While the laws and regulations related to water quality have reduced the risk of contamination of the Black River in New Mexico from oil and gas production, the risk from the high volume of truck traffic crossing the river at low-water access points remains high. In particular, one highly used crossing occurs at the upper end of the range of Texas hornshell in the Black River; a spill of water that has been collected as a byproduct of oil and gas production at this location could eliminate the entire population. For example, an overturned truck at a road crossing on the Clinch River in Virginia in 1998 resulted in the extirpation of three endangered species of mussels for ~~6~~six miles downstream (Jones *et al.* 2001, p. 28).

Regarding water law, while extraction of water is regulated by the States of New Mexico and Texas, instream flow is affected by many factors, including local precipitation, high-altitude



groundwater recharge, local groundwater table elevation, evapotranspiration, and anthropogenic water use. The Black River is expected to lose streamflow due to increased air temperature and reduced precipitation alone (Bren School of Environmental Management 2014, p. 91).

Appropriate water management can help ensure sufficient streamflow, but if the amount of water entering the system decreases and anthropogenic water use remains at the same rate, streamflow levels will decrease. Therefore, although existing water law may ~~ameliorate~~mitigate water flow reductions, it is not sufficient to protect Texas hornshell from the effects of reduced streamflow.

*(88) Comment:* One commenter requested we provide data on water flow, water quality, the risk of spills, and on the Pecos River population of Texas hornshell.

*Our Response:* This information is provided in the SSA report in the following locations: water flow (Chapter 4.3 and Appendix B); water quality and spill risk (Chapter 4.2 and Appendix B); and Pecos River population data (Chapter 3.2.2). References cited are available at [www.regulations.gov](http://www.regulations.gov) in Docket No. FWS-R2-ES-2016-0077.

*(99) Comment:* Two commenters stated that climate change does not exacerbate the risk factors in our analysis, and that our analysis is based on opinion rather than fact.

*Our Response:* We recognize that there are scientific differences of opinion on many aspects of climate change, including the role of natural variability in climate and ~~also~~ the uncertainties involved with climate change projections and how local ecosystems may respond. We relied on synthesis documents (e.g., IPCC 2013) that present the consensus view of a very large number of experts on climate change from around the world. Additionally, we relied on downscaled climate change projections (e.g., Nohara 2006, CH2MHILL 2008, Mace and Wade 2008, Bren School of Environmental Management 2014) that forecast what is expected to occur to landscapes in the Southwest and Texas. We have found that these reports, as well as the

scientific papers used in those reports or resulting from those reports, represent the best available scientific information we can use to inform our decision and have relied upon them and provided citations within our analysis. Climate change impacts are expected to result in lower stream flows, poorer water quality, increased accumulation of fine sediments, and, in the Devils River, increased predation.

(100) *Comment:* Two commenters expressed that the risks to the Black River from low flows and contamination are high.

*Our Response:* ~~We agree that the~~ The Texas hornshell population in the Black River is at risk of reduction or extirpation from low flows or contamination. The CCA/CCAA recently signed with water users, oil and gas developers, landowners, and other partners will be critical to reduce threats to the species in this area while improving physical habitat and water quality.